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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,976

05/16/2005

Fabien Cens

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7599

23718

7590

09/30/2005

SCHLUMBERGER OILFIELD SERVICES

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EXAMINER

MACK, COREY D


ART UNIT

PAPER NUMBER

2855

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/521,976	Applicant(s) CENS ET AL.	
	Examiner Corey D. Mack	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/21/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12-16 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stapler (US 4,114,440) in view of Taylor (GB 2 083 210).

A. With respect to Claims 12 and 22, Stapler discloses an impeller (Fig. 4) for data acquisition in a flow, comprising: a bladed hub 70, wherein the impeller is made of a plastic material and is sealed and trapped on a spindle 76, 126 with at least one magnet 72 in its hub in order to protect the magnet from water and chemicals when immersed in the fluid flow (column 4, line 45 – column 5, line 6). Stapler does not disclose that the device is made by molding the spindle and the magnet in the hub. However, Taylor discloses a turbine flowmeter comprising a turbine of plastic and trapping a spindle in its hub in a single moulding operation and used to measure flow rate of a fluid in a flow path (page 2, lines 54-93). Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to include in Stapler moulding a turbine of plastic and sealingly trapping a spindle in the hub in order to seal and protect the magnet from the fluid flow while measuring flow rate.

B. With respect to Claim 13, Stapler discloses that the impeller also traps an insert 78 to house the magnet 72.

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C. With respect to Claim 14, Stapler discloses that the insert 78 and the spindle 76, 126 are fixed to each other.

D. With respect to Claim 15, Stapler discloses that the insert 78 is crimped around the spindle 76 (See Fig. 5).

E. With respect to Claim 16, Stapler discloses that the cross section of the spindle 76 is reduced at the crimping (See Fig. 5).

F. With respect to Claim 18-21, Stapler, as modified by Taylor, discloses the invention as claimed, except they do not explicitly disclose the use of polyethercetone thermoplastic resin, samarium cobalt magnet, a tungsten carbide spindle, and aluminum insert. However, these materials are notoriously well-known by those of ordinary skill in the art of flow measurement in order to utilize their magnetic and corrosion resistance properties. (See MPEP §2144.03).

Therefore, it would have been within the knowledge of one of ordinary skill in the art to include in Stapler, as modified by Taylor, resin, samarium cobalt, tungsten carbide, and aluminum in order to utilize their magnet and corrosion resistance properties.

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stapler (US 4,114,440) in view of Taylor (GB 2 083 210) as applied to claims 12-16 and 18-22 above, and further in view of Kim, et al. (US 2003/0066361).

A. With respect to Claim 17, Stapler, as modified by Taylor, discloses the invention as claimed, except they do not explicitly disclose at least one pair of magnets on each side of the spindle that attract each other. Kim discloses a turbine flowmeter comprising at least one pair of magnets 106a, 106b, 108a, 108b on each side of the spindle 100 that attract each other in order to sense the rotation of the rotor (paragraph 0023). Therefore, at the time the invention was made,

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it would have been obvious to one of ordinary skill in the art to include in Stapler, as modified by Taylor, at least one pair of magnets on each side of the spindle in order to sense the rotation of the rotor.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Williams, et al. (US 4,294,262) discloses a turbine flowmeter comprising samarium cobalt magnets.

Weider (US 6,019,003) discloses a flowmeter comprising a tungsten carbide spindle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey D. Mack whose telephone number is (571) 272-2181. The examiner can normally be reached on M-F, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Corey D. Mack, Esq.
Patent Examiner
Art Unit 2855

September 26, 2005



HARSHAD PATEL
PRIMARY EXAMINER